DEPARTMENT of ENVIRONMENTAL SERVICES Water Supply & Pollution Control Division - Biology Bureau

LAKE TROPHIC DATA

MORPHOMETRIC:

Lake: CONNECTICUT LAKE, SECOND	Lake Area (ha): 520.42
Town: PITTSBURG	Maximum depth (m): 19.2
County: Coos	Mean depth (m): 6.1
River Basin: Connecticut	Volume (m^3) : 31676500
Latitude: 45°09'20" N	Relative depth: 0.7
Longitude: 71°10'15" W	Shore configuration: 2.19
Elevation (ft): 1871	Areal water load (m/yr): 13.47
Shore length (m): 17700	Flushing rate (yr^{-1}) : 2.20
Watershed area (ha): 9298.1	P retention coeff.: 0.52
% watershed ponded: 2.1	Lake type: natural w/dam

BIOLOGICAL:	1 February 1995	17 August 1994
DOM. PHYTOPLANKTON (% TOTAL) #1	ASTERIONELLA 75%	DINOBRYON 35%
#2	COELOSPHAERIUM 10%	SYNURA 25%
#3		
PHYTOPLANKTON ABUNDANCE (units/mL)		
CHLOROPHYLL-A (µg/L)		7.86
DOM. ZOOPLANKTON (% TOTAL) #1	ROTIFER SPP. 32%	KELLICOTTIA 34%
#2	DAPHNIA 16%	KERATELLA 29%
#3	ACTINOPHRYS 16%	NAUPLIUS LARVA 19%
ROTIFERS/LITER	10	65
MICROCRUSTACEA/LITER	5	33
ZOOPLANKTON ABUNDANCE (#/L)	19	98
VASCULAR PLANT ABUNDANCE		Scattered
SECCHI DISK TRANSPARENCY (m)		2.8
BOTTOM DISSOLVED OXYGEN (mg/L)	1.9	2.9
BACTERIA (E. coli, #/100 m1) #1		9
#2		
#3		

SUMMER THERMAL STRATIFICATION:

stratified

Depth of thermocline (m): 7.5 Hypolimnion volume (m³): 5705500 Anoxic volume (m³): None

HEMICAL:	Lake: CONNECTICUT LAKE, SECONI Town: PITTSBURG				SECOND
	1 February 1995		17 August 1994		
DEPTH (m)	6.0	12.0	3.0	7.5	13.0
pH (units)	6.6	6.3	7.2	6.2	6.0
A.N.C. (Alkalinity)	8.0	8.3	7.2	5.9	4.7
NITRATE NITROGEN	0.16	0.22	< 0.05		0.28
TOTAL KJELDAHL NITROGEN	0.19	0.17	0.26	0.20	0.25
TOTAL PHOSPHORUS	0.009	0.009	0.006	0.013	0.011
CONDUCTIVITY (µmhos/cm)	30.2	32.8	28.6	28.7	29.2
APPARENT COLOR (cpu)	35	42	38	42	45
MAGNESIUM			0.67		
CALCIUM			3.5		
SODIUM			0.7		
POTASSIUM			0.24		
CHLORIDE	< 2	< 2	< 2		< 2
SULFATE	3	4	3		3
TN : TP	39	43	43		48
CALCITE SATURATION INDEX			2.7		

All results in mg/L unless indicated otherwise

TROPHIC CLASSIFICATION: 1994

-	D.O.	S.D.	PLANT	CHL	TOTAL	CLASS
	2	3	1	1	7	Meso.

COMMENTS:

- 1. This lake was previously surveyed and classified in 1980. It was classified oligotrophic in 1980 but was essentially borderline oligotrophic/mesotrophic in both years; there was no significant change in water quality between the two years.
- 2. The dominant rotifer in the winter was a soft-bodied type that became "scrunched up" from the preservative; it may have been <u>Synchaeta</u>.
- 3. The water level was two to three feet below normal during the summer sampling.

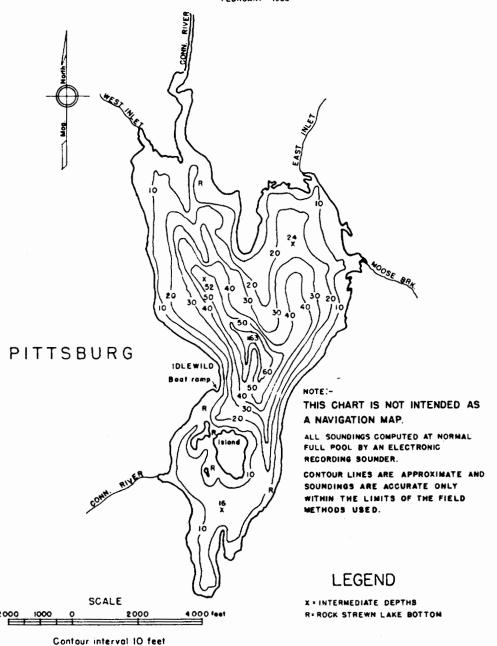
SECOND CONNECTICUT LAKE

DEPTH CONTOUR CHART

PREPARED AND PUBLISHED BY

THE NEW HAMPSHIRE FISH & GAME DEPARTMENT

FIELD DATA COLLECTED AS A SEGMENT OF DINGELL-JOHNSON FEDERAL AID PROJECT F 10 R FEBRUARY 1966



FIELD DATA SHEET

LAKE: CONNECTICUT LAKE, SECOND TOWN: PITTSBURG

DATE: 08/17/94 WEATHER: PARTLY SUNNY; BREEZY

DEPTH (M)	TEMP (°C)	*DISSOLVED OXYGEN	OXYGEN SATURATION
0.1	18.0	9.1	96 %
1.0	18.0	9.0	95 %
2.0	17.9	8.9	90 %
3.0	17.8	8.9	90 %
4.0	17.6	8.7	89 %
5.0	17.3	8.5	87 %
6.0	16.3	6.4	64 %
7.0	15.0	4.0	40 %
8.0	11.0	3.7	33 %
9.0	9.5	3.8	32 %
10.0	9.0	4.0	35 %
11.0	8.5	3.7	31 %
12.0	8.2	3.6	30 %
13.0	8.0	3.5	29 %
14.0	8.0	3.3	28 %
15.0	8.0	3.1	26 %
16.0	8.0	3.0	25 %
17.0	8.0	2.9	24 %
1.000			

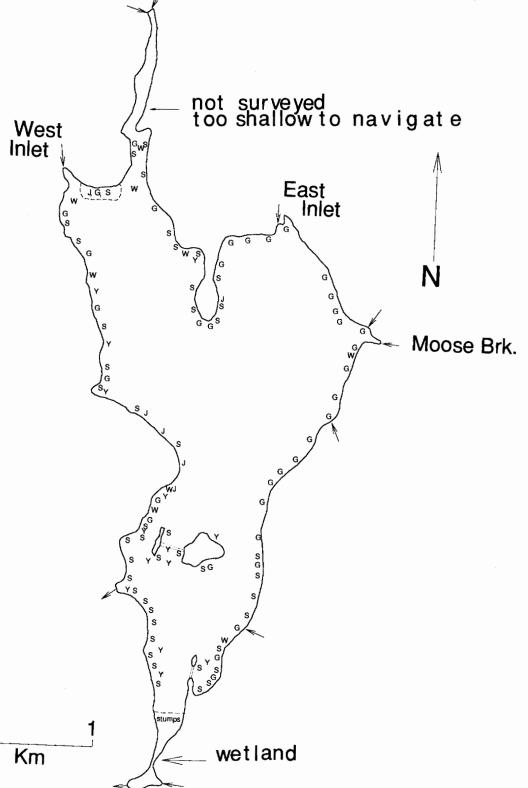
SECCHI DISK (m): 2.8 COMMENTS:

BOTTOM DEPTH (m): 17.4

TIME: 1045

*Dissolved oxygen values are in mg/L

Second Connecticut Lake Conn. River Pittsburg not surveyed too shallow to navigate



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AQUATIC PLANT SURVEY

LAKE: CONNECTICUT LAKE, SECOND TOWN: PITTSBURG DATE: 08/17/94 PLANT NAME Key **ABUNDANCE GENERIC** COMMON Rush Sparse Juncus W Pondweed Potamogeton Sparse Y Nuphar Yellow water lily Sparse G Gramineae Grass family Scattered S Sparganium Bur reed Scattered

OVERALL ABUNDANCE: Scattered

GENERAL OBSERVATIONS:

- 1. Sweet gale was common on shore around the entire pond, but is not depicted on the map.
- The lowered water level made navigation difficult. The narrow inlet channel at the north end of the lake was not surveyed for plants because it was too shallow to navigate. The narrow area at the southern end of the pond was a wetland.